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10/541,146	04/11/2006	Aloys Wobben	970054.489USPC	6164

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EXAMINER
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NGUYEN, NINH H

ART UNIT	PAPER NUMBER
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3745

MAIL DATE	DELIVERY MODE
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05/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/541,146

Applicant(s)

WOBHEN, ALOYS

Examiner

Ninh H. Nguyen

Art Unit

3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-19, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 15, 20-25, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/11/06, 02/13/07</u> . | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 3745

## DETAILED ACTION

### *Claims Objections*

1. Claim 1 is objected to because of the following informalities: on line 5, after “of the rotor blade and having”, “and” should be replaced with - -an--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2-9, and 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being lack of antecedent basis for the limitation “the end region” in each of claims 2, 4, 5, 7, 9, and 14.

Claims 3, 6, 10, and 11-13 are indefinite as being dependent on at least one of the claims listed in the on line 1 of this paragraph. It is assumed that the end region is the tip region of a blade in this Office Action.

Claim 2 is further indefinite for lacking of antecedent basis for the limitation “the thread axis” on line 3 of the claim. It is assumed that the thread axis is the longitudinal axis of a rotor blade in this Office Action.

Claim 6 is indefinite by itself because it is unclear as to what has an increasing curvature towards the rotor blade tip. It is assumed that the rotor blade has an increasing curvature toward the rotor blade tip in this Office Action.

Claims 17, 18-20, 27, and 28 are indefinite because of the limitation “the rotor blade tip is curved or angled in its outer region” on line 3 of claim 17 since curved and angled are not

Art Unit: 3745

equivalent alternative of each other. Claims 18-20, 27, and 28 are indefinite as being dependent on claim 17.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-6, 8, 14, 17,18, and 27, as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Evans et al. (5,215,441).

Evans discloses a rotor blade tip for a rotor blade (Figs. 1-4) with an aerodynamic profile having a pressure side 14 and a suction side 15, wherein the rotor blade tip is curved in the tip region 21 in the direction of the pressure side of the rotor blade (Fig. 1); and having an edge arc extending from the tip end in the direction of the pressure side, characterized in that in its tip region the rotor blade tip narrows towards an arc upper edge, and has an edge arc leading edge and an edge arc trailing edge; wherein the edge arc leading edge and the edge arc trailing edge extend equally in a predetermined curved gradient to the edge arc upper edge (Fig. 1);

wherein the trailing edge of the rotor blade blends fluidly into the trailing edge of the end region (Fig. 1);

wherein the trailing edge of the end region is of a predetermined radius of curvature (Fig. 2);

Art Unit: 3745

wherein the rotor blade has an increasing curvature towards a blade tip (Fig. 3; “j” shaped cross section; col. 3, lines 11-13);

wherein the end region forms at most 1/3 of the rotor blade length (Fig. 3); and

wherein a region between the rotor blade root and the end region is angled in the direction of the leading edge (the blade is pitched as seen in Fig. 1).

6. Claims 17, 19, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Weetman (6,334,705).

Weetman discloses a rotor blade tip for a rotor blade (Figs. 1-23A) with an aerodynamic profile having a pressure side 24 and a suction side 22, wherein the rotor blade tip is angled in its outer region in the direction of the pressure side of the rotor blade (Fig. 1; col. 4, lines 9-12), wherein the outer region narrows;

wherein the cross-sectional plane of the outer region extends at a predetermined angle relative to the cross-sectional plane of the rest of the rotor blade.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al. in view of Salzman et al. (4,722,608).

Evans discloses all the limitations except the end region is not in the form of an independent portion which can be fitted into the rotor blade as claimed.

Salzman teaches a rotor blade (Figs. 1-7) comprising a hub end, a tip end, a leading edge, a trailing edge (Figs. 1A, 2A), and a separate tip portion 40 angled in the direction of the suction side surface.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the rotor blade tip of Evans as an independent portion which can be fitted into the rotor blade as an expedience to make the rotor blade tip as taught by Salzman.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al.

Evans discloses all the limitations except the blade tip is not made of aluminum as claimed.

Since the applicant has not disclosed that having blade tip made of aluminum solves any stated problem or is for any particular purpose above the fact that aluminum is physically strong and lightweight, and it appears that the blade tip of Evans would perform equally well with the blade tip made of aluminum as claimed by applicant, it would have been an obvious matter of design choice to modify the blade tip of Evans by utilizing the specific material as claimed.

***Allowable Subject Matter***

10. Claims 2, 3, and 9-13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 3745

11. Claims 15, 20-25, 28, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Prior Art***

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 2 patents.

Connolly et al. (5,525,269) and Puckett (3,171,495) are cited to show different propeller having winglets.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 3745

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).

  
NINH H. NGUYEN  
PRIMARY EXAMINER

Nhn  
May 17, 2007